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ABSTRACT

A mail questionnaire study involving 3,000 Texas educators was undertaken to describe the effects of certain Texas education reform policies as they relate to teacher burnout. Focus was on determining how the production of teacher-required paperwork and mandated student achievement testing influence teacher burnout. An initial mailing resulted in 700 responses. In response to a second mailing to 230 of the non-respondents, 97 additional responses were received. Scales incorporated into the study included the Mandated Tests Scale, Paperwork Scale, Burnout Scale, Pupil Control Ideology, and Locus of Control. The study also included a telephone interview component. Fifty-one psychological and demographic predictor variables were added to the regression equation to account for variance in the Emotional Exhaustion Factor of the Teacher Burnout Scale. Results indicate that: (1) paperwork is a factor in burnout of Texas teachers; (2) educators are not totally opposed to the mandated testing of their students, but all teachers are concerned about the misuses of testing; and (3) mandated testing and the associated paperwork may reduce teaching effectiveness and contribute to burnout. Twelve tables are provided. (TJH)

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STRESS, BURNOUT AND REFORM MANDATED ACCOUNTABILITY*

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STRESS, BURNOUT AND REFORM MANDATED ACCOUNTABILITY

Introduction

Most state education reforms have had as a major element some form of teacher performance accountability. Additionally, these reforms have enhanced the power of the state education agency (see Plank 1986 and Lutz 1987). Although each state has legislated its own special mechanisms for accomplishing those ends, two results appear to be salient across states. One is a significant increase in the amount of paperwork required by the state agency in order to document accountability. The other is some type of mandated testing which proposes to be a measure of local school district accountability. Both of these severly impact the classroom teacher.

As the work demand increases, pressures build and stress escalates. Without commensurate resources to deal with that stress teachers experience the psychological syndrome called burnout.

Purpose of the Study

The purpose of this study was to describe the effects of certain Texas education reform policy as it relates to teacher burnout. More specifically this research sought to determine how the production of teacher required paperwork (reports, forms, etc. required to demonstrate accountability) and mandated pupil achievement testing (a presumed measure of teacher/school/district performance accountability) influences teacher burnout (a measure of a teacher's ability to perform).

Perspective

Maslach (1982) defines burnout as

> a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment that can occur among individuals who do "people work" of some kind. It is a response to the chronic emotional strain of dealing extensively with other human beings, particularly when they are troubled or having problems (p. 3).

In 1974, Freudenberger described the condition of burnout which affected helping-professions workers as having three stages: (1) increasing pressure to be effective in their work, (2) demanding more of themselves in attempts to help others, and finally, (3) burnout as a result of exhausted resources. Over-commitment and dedication were identified as contributing factors in Freudenberger's conceptualization.

According to Farber (1984), the literature on stress and burnout has consistently failed to separate the two ideas so that both concepts are poorly understood. He further asserted that the seriousness of the teacher burnout problem lies in the fact that teachers are often "worn out," not "burned out."

Relationship of Teacher Stress to Teacher Burnout

Although the literature on the problems of teachers often uses the terms "burnout" and "stress" interchangeably, Farber (1984) conceptualized burnout as "the final step in a progression of unsuccessful attempts to cope with negative stress conditions" (p. 324). Burnout can thus be seen as the failure to mediate stress. Farber (1984) notes what he calls, "a perfect recipe for burnout:" teachers with high expectations and few resources to cope with their resulting frustrations (p. 327). On the other hand, a primary source of satisfaction for teachers is "their

sense of helpful intervention in the lives of their students" (Farber, 1984: p. 330). Kaiser (1981) noted that what is most stressful to a teacher is not teaching itself but everything which gets in the way of teaching. This notion is echoed in surveys which cite non-teaching duties as high on the list of teacher frustrations (Dedrick, Hawkes, & Smith, 1981; Hawkes & Dedrick, 1983).

Control of Time and Resources

Time as a resource, both in terms of the amount available and the discretionary poser and skill with which it is used, is an important aspect of stress. The amount of work required to be produced within a given amount of time is critical (Payne & Fletcher, 1983) and work overload is cited by Sales, (1969) and French and Caplon (1973) as contributing to stress when it reaches severe proportion. Yet, if individuals have the necessary autonomy to control their time and the methods of meeting the demands stress can be minimized. Unfortunately, as Payne & Fletcher (1983) observe, teachers are often permitted little discretion in client selection, curriculum choice or control over time.

Lacking autonomy in the above areas, teachers exhibit what Blase (1984) terms "performance adaption syndrome." Thus, when teachers are burdened with increased demands without additional resources, or the autonomy to redistribute existing resources, high stress is likely to occur producing coping behaviors such as assigning more busy work in class and less homework (to be marked), reducing the quality and quantity of pupil and parent

feedback, reusing old materials and lesson plans, reducing interaction with pupils, limiting hours spent on work tasks and a general reduction of innovative and creative teaching behaviors. They become less caring, less creative, and less involved with the pupils, their students and their colleagues.

As noted by Levi (1981) lacking control of essential resources necessary to complete the job required and lacking the autonomy to define or redefine the job can lead to anxiety, depression, learned helplessness, and increased passivity.

Demands, Supports, and Constraints

Two relatively independent lines of research indicate that stress is related to: (1) high work demands (Walker & Guest, 1952; Morse & Reimer, 1956; Hackman & Lawler, 1971), and (2) low levels of autonomy/discretion (Sales, 1964; French & Caplan, 1973). Payne and Fletcher (1983) conceptualize occupational stress as a function of the balance between demands, supports, and constraints. Related to the notion of control of time, the concept over-demand (asking for more and more of an individual without providing additional support) is important in understanding job related stress (Blase, 1984).

Teacher and Student Performance

An important casualty of stress is teacher creativity. In order to make the most of their creative abilities, teachers require time to cultivate emotional, social, intellectual, and technical qualities and competence. As a result of time constraints, teachers are unable to plan for or introduce innovative ideas, materials, and techniques into their classrooms. Relying on old materials and techniques, they often

have difficulty in motivating themselves and their students (Blase, 1984).

One of the strongest emerging effects of stress is loss of intellectual curiosity and enthusiasm. As a result, teachers often structure their classes with more emphasis on control and order than on intellectual stimulation and the excitement of learning. Further, stress and lack of time interfere with teachers' ability to care to be personally sensitive to their students. They become less tolerant, less patient, less caring, and less involved. Moreover, humor, creative involvement, elaboration of subject matter, detailed feedback, and teacher/student interaction decrease. Finally, Blase notes that the teachers' negative adaptations to the results of stress contribute to a lack of higher-order cognitive activities. The end result of these changes is mediocrity of instructional programs.

In agreement with Blase Farber (1984) found that teacher burnout had a negative effect on students' classroom performance and speculated that the effects of teacher burnout are lack of enthusiasm and unchecked frustration. Moracco and McFadden (1982) suggest that inadequate teacher work performance was a behavioral manifestation of teacher burnout.

State Mandated Achievement Testing

As a consequence of the centralization and politicization of the state education systems, two new roles of standardized testing have arisen: monitoring the educational system and certifying individual performance (Airasian, 1987). After 15

years of focus on equality of opportunity in education, the focus has now shifted to quality of education. This has come about principally through the assertion that the United States is losing economic power, and if we are to continue to compete, we must improve the quality of public education. Thus focus on monitoring the educational system and the pupil performance through mandated tests has become politically fashionable.

Of this change in the role of standardized testing, Anderson (1985, p. 23) writes:

> The initial purpose of most state wide testing was simply to observe learning trends. The emphasis was on "Where are we?" not on "Whose fault is it that we are where we are?" Unfortunately, the assignment of responsibility came so quickly that some people forgot that the objective observation of trends needs to continue and that it implies different test characteristics than an accountability test.

By making the results of these mandated tests important, state agencies and society have made the tests themselves important, leading to several consequences. First, audiences are no longer limited to professionals; the larger society now seeks assurance of organizational success. Second, mandating state-wide tests erodes local control of schools and education. As the agency controlling the design and administration of these tests, the state exerts considerable influence over the curriculum of the school districts and the classroom. Third, the differences in the values and goals of varied social groups have been brought into sharp focus by comparison of these scores across ethnic and racial groups, school districts, school campuses and individual teachers. It might be concluded that at "the minimum, competency testing movement has been identified as more of a political

movement than an educational reform effort" (Dawson & Dawson, 1985, p. 299).

Accountability

One of the primary motivations of mandated testing is to satisfy interest groups and the general public that education is helping society achieve its goals. The President of the Educational Testing Service (ETS) Greg Anrig has been quoted as saying, "the current national mania for testing has resulted in an undesirable situation where 'if it moves, test it' has become an operating principle" (First & Cardenas, 1986). Of this principle, First & Cardenas state,

> ...in case after case we are finding great and increasing evidence that test scores are being widely used for a variety of inappropriate purposes in making decisions about students, teachers, and state and local programming. The result, we think, is that testing often is having a harmful impact on education and particularly on the interests of minority and special needs students. (p. 6)

And Friedman (1979) argues:

> The word accountability is thus well chosen for this movement for accountability in education functions as a threat....As with most threats, it is focused on the beginning of the process, not the end. (p. 367) The only people who might find accountability measures not to be a bluff are those without any political power, who are more than likely, but not certainly, doing poorly in the system. (p. 369)

Change, Uncertainty and Teacher Response

Citing a study by Blase (1984), Lutz and Maddirala (1987) conclude that the impact of reform changes is difficult to deal with, especially while those changes are still in progress:

> When an individual perceives that behavioral, emotional, or attitudinal adjustments are required, stress is likely to occur. Change causes imbalance between the individual and the environment so that the individual must adapt in order to reestablish that

balance, (p. 31).

Dawson and Dawson (1985) indicat that stress due to change in the environment is heightened if change is great or relatively sudden. Therefore, it might be expected that teachers are experiencing a significant increase in frustration or tension.

Teaching to the Test

Teachers and teachers' organizations have been among the strongest opponents of mandated tests. Dawson and Dawson (1985) write:

> The negative argument is that teachers will be forced to "teach to the test." They will be pressured to make sure their students perform well on the tests and evaluated by how well their students do, and teachers will be forced to adjust their courses to emphasize test oriented basic skills, while other aspects of the curriculum are slighted. (pp. 288-289)

They report that in a Missouri district where state testing was mandated teachers felt pressured to make sure that students did well, even if they had to cheat. Only 14% of the teachers in the Missouri school district saw the impact of the test on the curriculum as positive, while over 50% saw it as negative.

Similarly, Mika (1982) reports an incident in Virginia in which the central administration took materials directly from mandated tests and required teachers to use those materials to teach to the test. Few would oppose a test which is tied to curriculum, but that there is great opposition to a test which becomes either the controller of the curriculum or the curriculum itself. Kennedy (1983) posits four levels of teacher-felt stress as a result of test use; the highest level was induced by the use of teacher evaluation as measured by student test grades. He found that teachers in districts which used tests in this way

were morose, apathetic, and cynical. In spite of the districts' stated intention to use test scores for teacher evaluation, Kennedy found no teachers who tried to improve their instruction based on test data. However, she did find many teachers who said that they were going to leave the profession.

Cheating

Pushed hard enough to get test scores up, teachers begin to believe they are being asked to cheat. Whether they do or do not, this belief has a profound impact on the attitudes of teachers about themselves, their jobs, and their entire profession. Discussing their analysis of test scores, Stringfield and Hartman (1985) write:

> We believe that this problem [grade-to-grade variance in test scores beyond the ranges of believability] is caused by teachers feeling substantial pressure to 'get the test scores up' at any cost. One teacher, for example, reported that her principal said to her, "None of your students will fail the State's Basic Skills Test." When she asked how that could be, considering that many of her students could not read at the beginning of the year, and that a few still could not, he simply repeated the statement. The teacher read both the questions and the answers to the class; no one failed. (p. 7)

Similarly, Dawson and Dawson (1985) reported that in some Missouri districts teachers felt pressured to make sure their students did well on the test even if they had to cheat. Stringfield and Hartman (1985) concluded:

> Stated directly, evidence suggests that in school systems where (a) pressure is placed on principals and teachers to raise test scores without concomitant increase in resources, and (b) substantial measures are not taken to insure the veracity of test administration, testing practices may arise which artificially inflate student test scores. (p. 1)

Summary

Recent education reforms in numerous states have featured a demand for educational accountability. That accountability is operationalized in many cases by increased state education agency power and control over local educational agencies. One manifestation of that power is a demand for local accountability through bureaucratic reporting procedures, generating large amounts of paperwork, much of which inevitably falls on the heads of teachers. A second method of achieving state level accountability is mandating statewide pupil achievement testing through which individual districts, schools and teachers can be and are compared.

These changes impact teachers increasing their stress levels, often reducing their control over time and professional judgements and options. The Texas education reform has such components in its process and therefore provides an opportunity to determine the extent to which teachers are impacted by those reforms and the result of that impact on teacher burnout.

Methods and Procedure

The following section details methods and procedures of sampling, instrumentation, and data the analyses used in this research.

The Sample

Using a population defined as those educators listed by the Texas Education Agency (TEA) on their 1985-86 computer tape of educators in the Texas Public Schools, a random sample of 3,000 Texas educators was selected.

Data Collections

An initial letter was sent to each of the 3,000 teachers telling them of the study, of their selection as a member of the sample, and of the imminent arrival of the questionnaire by mail. Four days later the initial questionnaire was mailed.

Three weeks were allowed for responses. Each response was checked against the original list. Those who had not responded were sent a postcard reminding them of the study and requesting they respond or, if necessary, call the Center for Policy Studies and Research for an additional questionnaire. A 23% return (n=700) was obtained. No additional effort was made to increase the response sample.

Two weeks later, a random sample of 10% of all those remaining in the original sample list (non-respondents) were designated as the sample of non-respondent. These 230 educators were sent a letter informing them that they were selected as a special and important group of our original sample and as such would be receiving another questionnaire. Four days later, a copy of the questionnaire was sent to the 230 educators in this non-respondent sample. Data from this non-respondent sample (42% or 97 educators responded) were used to determine whether or not systematic bias existed in our respondent sample.

Use of a Non-Respondent Sample

A non-respondent sample is not simply another effort to increase the percentage of respondents. It should not be added to the respondent sample. It is very simply and importantly a look at those who did not respond in an effort to discover how the respondent group is similar to or dissimilar from the non-

respondent group and, therefore, how generalizations from the respondent group might be correct or incorrect.

Some, in fact most, methodologists insist on 70%, or even 90% response rates to mail questionnaires (Kidder and Juda, 1986: 222-224). Given the nature of almost any population, the hope of obtaining such a return of a mailed questionnaire is not a hope but a fantasy. Even if a 90% return was achieved how can one be sure the remaining 10% of that sample was not dramatically different in one or more important variables? Would it make no difference to find that, while 90% of some group were delighted with a new hair coloring, all of the remaining 10% (non-respondents) were blinded by the coloring and therefore unable to respond to a written questionnaire?

Kerlinger, surely a positivist and a good methodologist, suggests what might be done with small return samples from mail surveys. He says, "...lacking such returns [80-90%],...learn something about the characteristics of the non-respondents" (1986: 380). And twenty five years earlier Leslie (1972) "...questions the validity of this negative stance toward mail survey" and presents data supporting "...an alternative to the view that non-response always represents bias" (p. 324). Leslie's evidence indicates that responses from samples of individuals with common values, such as from within a profession, tend to be consistent from sample to sample overtime. That is, non-respondent bias is not as common as supposed and a small respondent sample not as dangerous as imagined particularly when sampling homogenous populations (i.e. public school teachers).

One might question why a researcher should bother with mail surveys at all or bother to explain that data from the small response samples to be expected might not be necessarily biased or dismissed out of hand. First, it is a matter of pragmatism, particularly in policy research. Policy studies must get into the population, get data and get out, while the issue is still a policy issue and something might be done about it. Second is the fact that methodologists often slavishly adhere to textbook rules and ignore post-positivistic epistemology. They rigorously avoid type I errors (thus increasing the possibility of type II errors), and as "peer judges" for professional journals reject articles inconsistent with their rigid methodological and estistomological position. This is much easier than to do the research that might refute (or substantiate) the policy researcher who risked a type I error in an effort to understand something otherwise unapproachable.

This is not an apology for a certain amount of relativism in epistemology nor is it a case for absolute relativism. Everything is not as good as anything else. However, to have attempted to know something is perhaps better than to not attempt to know at all. Phillips (1987) makes this simple point when he makes the Papperian assertion, "Scientists can only obtain finite amounts of evidence from areas of nature to which they have access, and according to the inductivists' account, they make inferences from this to what holds true in portions of nature that are beyond access..." (p. 7). Sampling returns of 80 to 90% are beyond my access although I would be pleased to be able to obtain them.

Again, this time quoting Popper in Conjectures and Reflectors, Phillips continues, "So my answer to the questions 'How do you know? What is the source or the basis of you assertion? What observations have led you to it?' would be: 'I don't know: my assertion was merely a guess. Never mind the source...if you are interested in the problem which I have tried to solve by my tentative assertion, you may help me by criticizing it [with data I presume] as severely as you can..." (p. v). The important question is, I believe, "How might I mislead you if I am wrong and, if I have mislead you, what harm will that do?" The specification of probable answers to those questions lies, in part, in the description of the non-respondent sample.

Qualitative Data Collection

Many respondents took the opportunity provided in the original questionnaire and wrote about mandated testing and paperwork as these affected them. Additionally, 120 teacher indicated a desire or willingness to be interviewed. Time and other resources made telephone interviews of this large group impossible. A second scaled questionnaire was developed and sent to those who indicated their willingness to be interviewed. In addition, 40 of those 120 were selected at random and interviewed by telephone. Telephone interviews were conducted between December 15 and December 30, 1986. Interviewers were trained in a 3-hour session at the Center for Policy Studies to conduct "guided, but unstructured" interviews (Lutz & Iannaccone, 1969). The interviews averaged 15 minutes in

length. Interviewers were trained to allow the respondents to say what they thought rather than be forced to respond to a structured and required set of planned questions.

All comments written by the 120 were read and summarized, second questionnaire data were scored, and telephone interviews categorized by type and percentage of response. These data provided additional validity checks on the data obtained from the respondent sample.

Instrumentation

Five instruments were used to collect data for this study: (1) Mandated Tests Scale, (2) Paperwork Scale, (3) Burnout Scale, (4) Pupil Control Ideology, and (5) Locus of Control. The development of the Mandated Tests Scale, the Paperwork Scale, and data on all other instruments used in this study are described below.

Development of the Mandated Test and Paperwork Scales

The development of both of these scales involved two steps: (1) a pilot study to refine the items and (2) a factor analysis to identify the factor structure.

Pilot Study

A pilot sample of 60 practicing teachers attending classes at East Texas State University was selected for exploration and refinement of the instrument. The sample included a diverse subset of Texas public school teachers. Although the minimum allowable ratio of cases to items is a matter of debate, the number of cases should certainly exceed the number of items. The ratio of cases to items should be as large as possible (Rummel,

1970). In the present study, the preliminary instrument included 34 mandated test items and the paperwork instrument included 45 items. Sixty teachers responded to each scale. This meets the minimum criterion for the ratio of cases to items.

Factor Analysis

Two criteria were used to reduce the total number of items in the paperwork and testing scales. First, the criterion of simple structure was employed in all factor analyses; only items which loaded high on one factor and low on all others were retained. Secondly, items were eliminated if they reduced substantially the internal consistency of the subset as measured by Cronbach's Coefficient Alpha.

The data from the sample were subjected to a factor analysis using principal factoring with varimax rotation. Ten factors accounted for over three-fourths of the variance in Mandated Testing. Items were retained that met a factor loading greater than .30 on one, and only one, of the factors, thus reducing the items from 34 to 14 in the Mandate Testing Scale.

A second factor analysis of 14 items of the Mandated Tests Scale using principal factoring yielded a 2-factor solution. The final 14 items of the Mandated Tests Scale consisted of two factors resulting in .72 Cronbach's Alpha reliability. Cronbach's Alpha reliability coefficients for the Mandated Tests sub-scales were the following: .83 for Frustration with Mandated Tests (Factor I), .67 for Coping with Mandated Tests (Factor II).

Ten factors also accounted for over three-fourths of the total variance in paperwork. Of the original 45 items 22 were retained each having a factor loading greater then .30 on one,

and only one, of the factors.

Factor analysis of the 22 item Paperwork Scale using principal factoring yielded 3-factors with a .84 Cronbach's Alpha coefficient of reliability. Cronbach's Alpha reliability coefficients for the Paperwork sub-scales were the following: .90 for Frustration with Paperwork (Factor I); .66 for Independence from Paperwork (Factor II); and .79 for Coping with Paperwork (Factor III).

Reliability of Paperwork and Mandated Testing Scales

Careful attention was given to the instruments used in this study. Instruments measuring the predictor variables were selected which reported good reliability scores. Additionally, reliability coefficients for those instruments were calculated using our respondent sample. These appear in Tables I and II.

TABLE I

RELIABILITY SCORES FOR PREDICTOR VARIABLE INSTRUMENTATION
(RESPONDENT SAMPLE)

Scale	Cronbach's Alpha	Standardized Alpha Item	Spearman-Brown	Guitman
Pupil Control Ideology	.7104	.7128	.6841	.6813
Locus of Control	.8318	.8420	.8060	.8018
Burn 1 (Emotional exhaustion)	.8744	.8693	.8447	.8166
Burn 2 (Personal accomplishment)	.7609	.7858	.7035	.7034

TABLE II

RELIABILITY SCORES FOR CRITERION VARIABLE INSTRUMENTATION (RESPONDENT SAMPLE)

Scale	Cronbach's	Standardized	Spearman-Brown	Guttman
Total Paperwork	.93	.87	.87	.79*
Frustration PW - 1	.91	.85	.86	.79*
Independence PW - 2	.65	.58	.62	.68*
Coping PW - 3	.85	.70	.76	.58*
Total Testing	.72	.74	.69	.69
Frustration MT - 1	.80	.81	.79	.79
Coping MT - 2	.67	.68	.66	.66

* Guttman scale was not run on the respondent sample for these items. The score is that attained on the original validation group.

Burnout Scale

The Maslach Burnout Scale (1982) contains three sub-scales that assess the different aspects of burnout. The emotional exhaustion sub-scale of the Burnout Scale assesses feelings of being emotionally overextended and exhausted by one's service, care, treatment, or instruction and the Personal Accomplishment sub-scale assesses feeling of competence and successful achievement in one's work with people. A high degree of burnout is reflected by high scores on the Emotional Exhaustion sub-scale and in low scores on the Personal Accomplishment sub-scales. In the present study, the Emotional Exhaustion and the Personal Accomplishment sub-scales were used, having .90 and .71

reliability coefficients, respectively. The standard error of measurement for each sub-scale is 3.80 for Emotional Exhaustion and 3.73 for Personal Accomplishment.

Locus of Control Scale

This scale measures internal-external Locus of Control as described by Rotter (1966). The scale is a 1963 revision of that first developed by James (1957). It contains 60 items, of which 30 are "true" items and 30 are "fillers" (namely the odd numbered items). All of the items in James' scale are worded in the external direction.

The scale employs a Likert-type format. Scores theoretically range from 0 (internal) to 90 (external). This study used Factor I of James' scale. Factor I (i.e. the 11 items common to both sex groups) can be viewed as a generalized measure of Locus of Control. It contains items that reflect the acceptance or rejection of the idea that outcomes are contingent upon: (1) luck (items: 64, 65, 66, 67, 68, and 69), (2) fate (items: 70, 71, and 72), and (3) powerful others (items: 73 and 74). James reports split-half reliabilities ranging from .84 to .96. Retest reliabilities vary from .71 to .86.

Pupil Control Ideology

This study used ten items from the Pupil Control Ideology to examine the humanistic-custodial orientation on the attitude of Texas school teachers. The concept of pupil control was operationalized along the humanistic-custodial continuum, using the Pupil Control Ideology (PCI) developed by Donald J. Willower, Terry L. Eidell, and Wayne K. Hoy (1967). The final version of the PCI is a 20-item, Likert-type scale with five categories for

each item ranging from "strongly agree" to "strongly disagree."

Reliability coefficients of the PCI instrument have been consistently high. A split-half reliability coefficient was calculated by correlating even-item sub-scores with odd-item sub-scores. The resulting Pearson product/moment coefficient was .91; application of the Spearman-Brown formula yielded a current coefficient of .95 (Willower, Eidell, & Hoy, 1967). The ten items used in this study were recommended by Hoy as producing approximately equal reliability and validity measures. Using the response sample in this study a Cronbach reliability of .79 was obtained for the 10 point scale.

Data Analyses and Findings

Although the purpose of this study was not to test hypotheses but rather to evaluate and suggest policy, the literature reviewed suggested several variables as being related to mandated testing and paperwork. The most important of these is teacher burnout. A second is the teacher's own sense of control in his/her life, either within self (internal) or in the hands of others or of chance (external). This factor is called Locus of Control. A third variable that strongly suggested itself was the teacher's notion of what is important in the classroom--either maintenance and order goals or client or pupil-centered goals. This variable is called Pupil Control Ideology.

Analysis of the Data

In an initial multi-variant analysis, a total of 51 psychological and demographic predictor variables collected in

this study in addition to the scores on the above variables were allowed to enter the regression equation in an effort to account for variance in the Emotional Exhaustion factor of the teacher Burnout Scale. Attitudes toward Paperwork Scale entered first and accounted for 28% of that variance. The second variable to enter was Locus of Control which accounted for an additional 10% or an accumulated total variance of 38% of the Emotional Exhaustion. At that point, no more operationally significant amount of the variance in Emotional Exhaustion could be accounted for by the addition of one or all of the other variables (See Table III). No demographic variable (i.e. age, education, etc.) was significantly related to Emotional Exhaustion.

TABLE III

SUMMARY TABLE OF EMOTIONAL EXHAUSTION
WITH 51 CRITERION VARIABLES

VARIABLE	MULTIPLE R	R SQUARE	ADJUSTED R Square	F	SIGNIFICANCE
Paperwork Scale	.52	.28	.28	115.71	<.001
Locus of Control	.61	.38	.38	92.51	<.001

An effort was also made to determine the relationships between all of the predictor variables and the Personal Accomplishment factor of the Burnout Scale. None of the variables except Locus of Control was significantly related to the Personal Accomplishment factor. That variable accounted for 5% of the variance in the Personal Accomplishment (See Table IV).

TABLE IV

SUMMARY TABLE OF PERSONAL ACCOMPLISHMENT
WITH 51 CRITERION VARIABLES

VARIABLE	MULTIPLE R	R SQUARE	ADJUSTED R SQUARE	F	SIGNIFICANCE
Locus of Control	.23	.05	.05	17.78	<.001

In a third analysis, all of the Paperwork sub-scales (Frustration with Paperwork, Independence from Paperwork, and Coping with Paperwork) were examined to discover how they independently influenced Emotional Exhaustion. Frustration with Paperwork (Factor I of Paperwork Scale) and Coping with Paperwork (Factor III of Paperwork Scale) accounted for a combined 28% of the variance in the Emotional Exhaustion factor of the Burnout Scale. The Independence from Paperwork sub-scale did not enter the regression equation (See Table V).

TABLE V

SUMMARY TABLE OF EMOTIONAL EXHAUSTION WITH THREE FACTORS
OF THE PAPERWORK SCALE

VARIABLE	MULTIPLE R	R SQUARE	ADJUSTED R SQUARE	F	SIGNIFICANCE
Frustra-tion	.49	.24	.24	187.97	<.001
Coping	.53	.28	.28	115.44	<.001

In a fourth analysis, (Table VI), the Paperwork sub-scales, Locus of Control, and the Personal Accomplishment variables (Factor II of the Burnout Scale) were used as predictors in the regression analysis to test their ability to account for Emotional Exhaustion. Frustration with Paperwork (Factor I of the

Paperwork Scale) entered first and accounted for 24% of the variance in the Emotional Exhaustion factor of the Burnout Scale. The second variable to enter was Locus of Control which accounted for an additional 9% of Emotional Exhaustion or an accumulated 33% of the variance in Emotional Exhaustion. Independence from Paperwork (Factor II of the Paperwork Scale), Coping with Paperwork (Factor III of the Paperwork Scale), and Personal Accomplishment (Factor II of the Burnout Scale) were not found to account for additional significant amounts of variance in Emotional Exhaustion after Locus of Control entered.

TABLE VI

SUMMARY TABLE OF EMOTIONAL EXHAUSTION WITH LOCUS OF CONTROL AND THREE PAPERWORK SUB-SCALES

VARIABLE	MULTIPLE R	R SQUARE	ADJUSTED R SQUARE	F	SIGNIFICANCE
Frustration	.49	.24	.24	184.37	<.001
Locus of Control	.58	.34	.33	144.27	<.0001

In none of the above analyses did mandated testing account for any of the variance in teacher burnout. This did not mesh with observed reality. In order to check this phenomenon other analyses were run eliminating paperwork as a predictor variable.

By eliminating paperwork scores, but leaving mandated testing scores as a predictor variables, an accumulated total of 17% of the Emotional Exhaustion factor of,the Burnout Scale was accounted for. Coping with the Tests (Mandated Tests III) and Concern About Tests (Mandated Tests I) together accounted for

nine percent of the Emotional Exhaustion Factor of the Burnout Scale. Locus of Control contributed on additional 6%.

TABLE VII

SUMMARY TABLE OF EMOTIONAL EXHAUSTION WITH TWO SUB-SCALES OF MANDATED TESTS SCALE AND LOCUS OF CONTROL SCALE

N=605

Variable	Multiple R	Adjusted R Square	F	Significance
Mandated Tests II	.24	.06	38.382	<.001
Mandated Tests I	.30	.09	20.649	<.001
Locus of Control	.42	.17	61.686	<.001

Ancillary Analyses of Mandated Testing Effect

TEAMS (Texas Educational Assessment of Minimal Skills) involves reading, writing, and math and is administered to odd numbered grade levels. This suggests that teachers who teach the odd-numbered grade levels might feel more pressure from the mandated testing program and exhibit more burnout than do even-numbered grade teachers. In order to examine that question a random sample of 50 teachers from each group was drawn. A t-test of independent means was executed to determine if a difference existed between their mandated testing scores (Table VIII). The results show no significant difference between these two groups in their attitudes toward mandated tests and their coping behaviors. Such results suggest that all teachers in Texas are concerned about the effects of testing mandates on the curriculum, their teaching, and their pupils. These

attitudes appear to be professional rather than personal concerns and validate the notion that professions respond to questions concerning the profession as members of the profession and not as individuals.

TABLE VIII

T-TESTS FOR MANDATED TESTS: EVEN GRADE TEACHERS VS. ODD GRADE TEACHERS

Variable	n	Mean	Std. Dev.	Std. Error	T Value	df	2 Tail Prob.
Mandated Tests I							
Even Grade Teachers	50	26.02	4.02	0.58	1.91	98	NS
Odd Grade Teachers	50	24.35	4.62	0.66			
Mandated Tests II							
Even Grade Teachers	50	15.63	3.32	0.47	0.22	98	NS
Odd Grade Teachers	50	15.49	3.19	0.46			

* p >.05

Analysis of Second Questionnaire Data

One hundred twenty (120) respondents to the first questionnaire indicated they would be willing to provide additional information or be interviewed. A second questionnaire was sent to these 120 respondents.

The original questionnaire had been mailed early in the fall of 1986. The Texas Education Agency (TEA) had made a sincere effort during the summer of 1986 to reduce teacher paperwork. That effort resulted in new legislation aimed at reducing required teacher paperwork. The question remained as to whether a bureaucracy, whose tendency and nature was to crease records and verification, could effectively reduce that paperwork regardless of intent. It was assumed that the changes intended by the legislature and the TEA would be operational by November and one could determine if they had reduced the paperwork load. The second questionnaire provided the opportunity to check those assumptions. The following is an analysis of those data.

Teachers did <u>not</u> perceive that their paperwork load had been reduced. To the statement, "Paperwork has been greatly reduced when I compare this year with 1st year," 91.8% disagreed and only 4.9% agreed. The remaining were undecided. Among the group who disagree was 52.5% of the total respondents who <u>strongly</u> disagreed.

Eighty-three percent of the respondents felt that documentation of essential elements was still "too time consuming." Teachers did feel some relief (83%) from documentation of essential elements but felt no effective relief from overall paperwork demands (91.8%). Sixty one percent of the respondents felt that, "paperwork is causing me to spend less time in class with my students." Only 8.3% felt that they had enough time during their conference period to get their non-teaching assignments completed. A statistic of some interest is

that 32.2% of respondents reported spending more than 13 after-school hours per week and only 15.3% reported spending 3 or less after-school hours per week on paperwork.

Significantly, 90.2% of the respondents felt that the Texas Education Reform, House Bills 246 and 72, had "adversely affected" the professional autonomy of teachers. As professional autonomy should be an element in Locus of Control, and as Locus of Control was found to significantly affect teacher burnout, this finding appears important.

To the statement, "the real reason for requiring TEAMS is to evaluate teachers and schools," 63.9% agreed or strongly agreed. Seventy-three point eight percent (73.8%) felt that it is grossly unfair to compare classes and schools across the state by using TEAMS scores. Fifty-six percent (56%) disagreed or strongly disagreed that without TEAMS, or something like it, there is no way to know what was happening in Texas schools, whereas 31.1% agreed with the statement, and 13% were undecided. Finally, 54% of the teachers perceived that the present use of TEAMS scores was invalid and not in the best interest of better teaching, while 25% were undecided and 21% disagreed with the statement.

The Telephone Survey

The first telephone interview question sought to determine the teacher's feelings about whether or not paperwork had been reduced as a result of efforts of the State Board of Education and TEA. Teachers were asked:

> The State Board of Education and TEA have been very concerned about paperwork over the last year. They conducted hearings, established a committee, and amended the rules. They are even requiring school

districts to document ways in which teacher paperwork has been reduced. Do you find the paperwork greatly reduced this year?

Invariably respondents replied, immediately, with "no" or "absolutely not!" When encouraged and asked direct questions, some would admit that the documentation of essential elements was no longer so arduous. Others noted, however, that on-site TEA inspection teams still would have to be convinced that the elements had been taught and, therefore, paperwork documentation had to be done.

Next, the interviewees were asked what one or two things they would do to reduce paperwork. The major and most frequent suggestion was additional help in the form of teacher aides, paraprofessionals, volunteer help, or clerical assistance. Even shared or part-time aides, the interviewees said, would make a great deal of difference. Some teachers felt that such help would be more appreciated by teachers and more important than a raise in pay.

The respondents felt that there were two big losers due to the overburden of paperwork required of teachers. Pupils were the biggest losers. Teachers who spend two to four hours a night marking papers, making detailed lesson plans, checking to see if essential elements were learned, etc., simply had neither the additional time nor energy, on top of an 10 to 12-hour day, to plan for individual pupil differences, to counsel with students, or even keep up with the material they were trying to teach. In short, paperwork does not harm teachers only, but has an adverse effect on the teaching/learning environment and the entire phenomenon of public education at which the Texas education

reform is aimed.

The second loser was the individual teacher and his/her family. In the long run, however, the losers are the pupils and the society. Burned-out teachers either leave teaching or remain teachers "entrapped," unhappy, and largely ineffective.

Finally, respondents were asked, "What do you think is the most positive result of teacher paperwork?" Every respondent hesitated and had to search for an example. Some refused to admit to <u>any</u> positive aspect. Some referred to the fact that the paperwork was necessary for state funding. Others suggested that lesson plans, while of little use to them, were helpful when a substitute teacher was required or, perhaps, for a beginning teacher.

Other Qualitative Data

Respondents to the original questionnaire wrote hundreds of pages of anecdotes and comments. These were all read and classified. The following remarks based on those data provide, perhaps, the best picture of the feelings of the emotional exhaustion and burnout presently being endured by Texas teachers as a result, in their view, of the reform movement and the paperwork and mandated testing the reform has generated.

It may be helpful to listen to what a few respondents said about how paperwork affected them.

> We must complete daily lesson plans, discipline reports, reports on pupil progress, teaching goals, and instructional objectives. We are <u>accountable</u> for everything. So we run around with papers trying to document and record everything we do.

> We still do paperwork but much less than last year. That's because we have a new principal. "She understands!"
>
> I have to spend entire weekends (10-12 hours per day) grading papers and recording grades. This is in addition to other paperwork tasks.
>
> My doctor told me that paperwork is affecting my health. I spend four days a week at school until 5:15 p.m. doing paperwork that has little to do with instruction and everything to do with TEA and 94-142 accountability.
>
> I'm doing more paperwork now than before the paperwork reduction bill. I'm also spending more time filling out forms and tests so I can document the many things that we can be held accountable for.
>
> I am getting out of teaching. I regret this because I do love to teach and think I'm a good teacher. But I can't take all this paperwork, lunch duty, hall duty, etc., etc.
>
> Much of the paperwork must be designed by someone, somewhere, whose only job is to create paperwork.

The above set of teachers' comments is a reasonable representation of the hundreds of pages of written comments received from respondents. Some wrote to say they were not responding to the questionnaire because it was more paperwork. They had a good point! Such teachers were not classified as either respondents or non-respondents, because they did not respond to the questionnaire at all. But their comments give another perspective to the probable bias of the non-respondent group.

Regarding mandated testing teachers wrote:

> It is easy to get good results when you teach to the test. It looks good on paper, but students miss out...I am aware of many teachers that give students the test to study, [we presume the respondent means sample test questions] before taking the test.
>
> I have heard tales of teachers who read all questions aloud, raising their voices greatly when reading the

correct response.

The experience was positive but...the students were very stressed.

TEAMS does bring home the reality to students. They must accomplish something and not just pass the time of day.

The competency tests do help to see where student strengths and weaknesses are if administered properly. Some districts because of economics or particular populations have lower scores.

Our teaching staff and principals are very unhappy now, because we have been told, "You will raise TEAMS scores, or your job is on the line."

The state mandated test looks good on paper and to the press, but it is an unfair test to minority students.

Lots of people who have just slid by for years, have been forced to put a little effort into their teaching. I support testing, if it is used appropriately, because it is the nature of living organisms not to change until discomfort has been created.

Almost all respondents felt that sooner or later, given the pressure, some teachers would teach to the test. One said, "When ratings are attached to scores and pay to ratings--then scores will go up, one way or the other." Many teachers suggested that they would teach to the test but would not actually cheat! They would drill on areas they felt would be tested. Some claimed they did not engage in any coping practices, but they knew others who did.

The respondents were outspoken in their concern about the real purpose of the tests and the use which they might serve. Many felt the tests were being used by state agency to compare schools and school districts and that such a practice was unfair.

Other teachers were very positive, feeling that the tests

could be used to raise standards and create good public relations. Nearly every respondent, however, felt that mandated test scores were being used in some fashion to compare school districts, schools, and/or teachers. All respondents thought that such comparisons were unfair and would eventually be used for a teacher comparison on the same basis. One teacher made the following comment concerning the use of test scores and teacher evaluations: "Administrators say no and they are trying hard not to. But when they know the scores it has to have some effect on the teacher's appraisals."

Findings and Recommendations

Based on the analysis of the above quantitative and qualitative data, the following findings appear supported.

Finding #1. Teachers in Texas are experiencing considerable emotional exhaustion (burnout), and the paperwork burden imposed on them accounts for a significant amount (28%) of that burnout.

Finding #2. Another factor related to teacher burnout in Texas is the teachers' feelings that they no longer control their professional lives but are controlled by a set of mandates and directives (Locus of Control accounts for an additional 10% of the teacher burnout).

Finding #3. There is some evidence to support the contention that principals can be effective in helping teachers to feel less burdened by paperwork.

Finding #4. Teachers do not feel that paperwork has been reduced by efforts of the state legislature, the Texas Education Agency (TEA), or State Board of Education directives.

Finding #5. Although presently masked by the effect of paperwork, 9% of the teacher burnout in Texas is attributable to state mandated tests.

Finding #6. Teachers appear to be coping with mandated tests by teaching to the test. The more they resent or are frustrated by mandated testing the more likely they are to teach to the test.

Finding #7. To the extent that teachers are forced to cope with mandated testing, they feel a loss of their sense of control over their professional lives.

Analyses of the Non-respondents

If the non-respondent group in the sample is dissimilar to the respondent group in one or more important variables one cannot generalize to the population based on the data obtained from the respondents. This is the reason for caution when the percent of respondents is below 70-90%. Something is known about that non-respondent group in this research, however. It will be recalled that this non-respondent group was randomly sampled and data on the criterion and predictor variables were obtained. Tables IX and X display those data.

TABLE IX

VARIANCE IN EMOTIONAL EXHAUSTION ACCOUNTED FOR BY PAPERWORK SCALES, LOCUS OF CONTROL AND PUPIL CONTROL IDEOLOGY (NON-RESPONDENTS)

Variable	Multiple R	Adjusted R Square	F	Significance
Paperwork I (Frustration)	.65	.41	58.3	<.001
Paperwork III (Coping)	.69	.46	34.98	<.001
PCI	.71	.48	25,96	<.001

TABLE X

VARIANCE IN EMOTIONAL EXHAUSTION ACCOUNTED FOR BY MANDATED TESTING SCALES, LOCUS OF CONTROL, AND PUPIL CONTROL IDEOLOGY (NON-RESPONDENTS)

Variable	Multiple R	Adjusted R Square	F	Significance
Locus of Control	.35	.11	11.770	<.001
Mandated Tests II	.42	.16	5.499	<.001
Pupil Control Ideology	.46	.19	4.172	<.001

Recall that 28% of emotional exhaustion was accounted for in the respondent sample by paperwork frustration and coping scales (see Table V) and that adding Locus of Control accounted for a total of 38% of that variance. Apparently the non-respondent sample found paperwork even more stressful, as it accounts for 46% of the variance in emotional exhaustion. The same pattern can be observed with regard to mandated testing. It accounted for 19% of the variance in burnout among the non-respondents while accounting for only 9% in the non-respondent sample. Thus it appears that among non-respondents paperwork and mandated testing were even more stressful that to the respondent sample.

This was further verified by a second type of non-respondent. Some teachers (n=61) wrote, called, or returned incomplete questionnaires saying they were too burdened down with paperwork and mandated testing to respond to questionnaires. It seems justified to conclude that this third group (of non-

respondents) were at least as burdened and stressed by paperwork and testing as the other two samples.

From these data some quesses can be made about the likelihood that the conclusions based on the respondent sample are misleading. One can then judge how harmful it would be,even if a type II were committed, to reduce the paperwork and mandated pupil achievement testing threats among teachers. What is the risk of committing a type I error as apposed to a type II error?

Again consider the question as to whether or not one might be misled by this analyses of respondents when they represent only 23% of the random sample of 3000 educators in Texas. The data in Table XI should be of help. It describes major demographic categories comparing respondents with non-respondents.

TABLE XI

COMPARISON OF RESPONDENT AND NONRESPONDENT SAMPLES (DEMOGRAPHIC VARIABLES)

Group Demographic	Respondents n=700	Nonrespondents n=97	Group Demographics	Respondents n=700	Nonrespondents n=97
District Type			Race/ Ethnicity		
Urban	19%	21%	Black	8%	6%
Central City	13%	13%	Latino	10%	6%
Suburban (Growing)	17%	14%	White	81%	87%
Suburban (Stable)	16%	16%	Other	2%	1%
Nonmetro (1000+)	21%	23%	Total	101%	100%
Nonmetro (town)	8%	6%	Marital		
Rural	6%	0%	Single	12%	16%
Total	100%	99%	Married	75%	74%
			Divorced	10%	10%
			Widowed	3%	0%
			Total	101%	100%

TABLE XI continued

Region			**Degree**		
Panhandle	7%	10%	Bachelor	50%	47%
N.C. TX	24%	23%	Masters	34%	34%
West TX	7%	9%	Masters+30	15%	19%
South TX	23%	27%	Doctor	1%	0%
Central TX	15%	16%	Total	100%	100%
East TX	24%	16%			
Total	100%	101%	**Number of Children**		
			0	35%	32%
Sex			1	28%	29%
			2	27%	28%
Female	79%	80%	3	8%	9%
Male	21%	21%	4 +	2%	1%
Total	100%	101%	Total	100%	99%

* Percentages sometimes failed to total 100% due to rounding.

The variables presented in Table XI were selected as reasonable and usual demographic descriptors of samples and populations. These data demonstrate almost no differences between the respondent sample and the sample of non-respondents. It seems unlikely that those who failed to respond were very different from those who did respond. For instance, one might assume that teachers with children would have more difficulty finding time at home to complete the paperwork chores and be more frustrated. Thus if the non-respondents had more children the return of 23% may bias the findings. Such was not the case, however. Nor were there any major differences in demographic variables which one might assume to affect either predictor of criterion variables.

Table XII displays data comparing respondent and non-respondent samples on predictor and criterion variables. Again, the samples are almost exactly the same. The non-respondents did not differ from the respondents in their demographics nor on the predictor or criterion variables of interest in this study. Even

if the sample of non-respondents had been demographically different from the respondents, which they were not, they did not differ in the "expermental" variables. Non-respndents were no more or less burned out. They were not more frustrated by paperwork or mandated testing than were the respondents. Apparently the generalizing from the respondent sample to the total random sample cannot mislead anyone because the sample of non-respondents looks almost exactly like the respondents.

TABLE XII

COMPARISON OF RESPONDENT AND NON-RESPONDENT SAMPLES
(PREDICTOR AND CRITERION VARIABLES)

Group	Respondent n=700		Nonrespondent n=97	
	x	SD	x	SD
Paperwork				
Frustration	47.5	9.0	47.7	9.5
Independence	10.3	2.6	10.3	2.8
Coping	25.6	5.2	26.1	5.5
Mandated Testing				
Frustration	25.4	4.8	25.9	5.0
Coping	15.3	3.3	15.2	3.3
Burnout				
Emotional Exhaustion	25.4	7.0	24.8	8.3
Personal Accomplishment	16.5	3.7	15.8	3.8
Locus of Control	40.0	6.7	41.4	6.5
Pupil Control Ideology	33.2	5.6	33.9	5.5

Conclusions

There seems to be little doubt, based on the data reported here, that Texas teachers are frustrated, are stressed and are being burned out by the burden of paperwork placed on them. In

his recent book, Teacher Burnout in the Public Schools, Dworkin (1987) reports his findings about teacher burnout, quitting behavior, and entrapment. He reports that teacher burnout is significantly and operationally related to plans to quit. Yet many who are planning to quit teaching apparently do not. This, says Dworkin, is because college teacher preparation programs prepare individuals to do little other than to teach. Unable to leave the teaching field, these burned out individuals are economically forced to stay in teaching, entrapped, burned out, and no longer effective teachers. These entrapped teachers, he says, are a much greater problem for public education than those who leave.

Although the entrapped teacher is a greater problem than the quitting teacher according to Dworkin, the fact is that Texas schools must have some teacher in every classroom. Given that the Texas School Facilities Study: 1986-1996 estimated a need for 37,140 additional classrooms which will require new teachers, in addition to normal requirements, it seems likely that there will be a teacher shortage in Texas. Quitting behavior of teachers will then be a real and persistent problem in Texas for the next decade.

Whether the quitting behavior or entrapment is the major problem is not even the issue, however. The fact is, a large portion of teacher burnout is due to paperwork and the teachers' view that others, and not themselves, are controlling their professional lives. Both of these things can be influenced by administrative behavior. The present situation is contributing

to teacher burnout, and burnout will contribute to both quitting behavior and entrapment. At a time when interest in entering education as a career is at a 20-year low (down from 23.55 to 6.2% of all college freshmen), the public can ill afford to have teachers leave the classroom or become entrapped (Cooperative Institutional Research Program, 1987).

Educators in Texas are not totally opposed to the mandated testing of their pupils. All teachers are concerned about the misuses of testing, some of which have already occurred in Texas. The inappropriate use of these scores has created a haunting anxiety in nearly every teacher who wrote or whom we interviewed. The data indicate that the mandated testing has not added to the teacher burnout already created by paperwork. Yet the data suggest that the possibility of the misuse and abuse of mandated testing has created anxiety among teachers. In the best sense the TEAMS test might be a motivator to both teaching and learning. In the worst sense, given enough pressure, teachers know how to be sure their pupils do well on the tests even if the pupils cannot read. They just read the questions and read the answers, reading the right answers in a louder voice. The recently reported increases in achievement scores in Texas could reflect increases in teaching to the test instead of increases in learning.

The state mandated testing programs may be time bombs waiting either to be defused or to go off. If scores are used to diagnose problems and offer help, programs will be useful, and teacher anxiety will decrease. If scores are used to publicly find fault and punish, anxiety will increase. Teacher burnout

and entrapment may then reach higher proportions, teachers will learn how to cope, and the program will reduce teaching effectiveness instead of improving it.

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